

CLAIMS

1. A capacitor-coupled power supply apparatus characterized in that:

5 inductors are respectively inserted in series at the positive and negative sides of lines for guiding a direct current supplied from an alternating current power supply through a rectification circuit, or a direct current supplied directly from a direct current power supply;

10 capacitors are respectively inserted in series between the positive-side inductor and a load, and between the negative-side inductor and the load; and

 a switching element is connected between the coupling point of the positive-side inductor with the capacitor connected in series thereto, and the coupling point of the negative-side inductor and the capacitor connected in series thereto.

2. A capacitor-coupled power supply apparatus according to Claim 1, wherein the ratio in capacitance of the positive-side inductor to the negative-side inductor is a reciprocal number of the ratio in capacitance of the capacitor connected in series to the positive-side inductor, to the capacitor connected in series to the negative-side inductor.

25 3. A capacitor-coupled power supply apparatus according

to Claim 2, wherein the positive-side inductor and the negative-side inductor are the same in capacitance as each other, and the capacitor connected in series to the positive-side inductor and the capacitor connected in series to the negative-side inductor are the same in capacitance as each other.

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4. A capacitor-coupled power supply apparatus according to Claim 1, wherein a rectification circuit and a smoothing circuit are connected to the output ends of the capacitors.

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5. A capacitor-coupled power supply apparatus according to Claim 4, wherein smoothing inductors are respectively inserted in the positive-side and negative-side lines of the rectification circuit.